

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES
2. AMENDMENT/MODIFICATION NO. <b>PR-NC-03-10135/0001</b>	3. EFFECTIVE DATE <b>03/21/03</b>	4. REQUISITION/PURCHASE REQ. NO. <b>PR-NC-03-10135</b>	5. PROJECT NO. (If applicable)
6. ISSUED BY <b>Environmental Protection Agency RTP Procurement Operations Division (D143-01) 4930 Old Page Road Research Triangle Park, NC 27709</b>	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
		<b>Not Applicable.</b>	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		(✓)	9A. AMENDMENT OF SOLICITATION NO. <b>PR-NC-03-10135</b>
<b>To All Offerors/Bidders.</b>		✓	9B. DATED (SEE ITEM 11) <b>02/28/03</b>
			10A. MODIFICATION OF CONTRACT/ORDER NO.
			10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE		

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

**12. ACCOUNTING AND APPROPRIATION DATA (If required)****13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

**14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)**

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
		<b>DAN M. NEUSTEDTER</b>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
_____ (Signature of person authorized to sign)		_____ (Signature of Contracting Officer)	

NSN 7540-01-152-8070  
PREVIOUS EDITION UNUSABLE

30-105

STANDARD FORM 30 (REV 10-83)  
Prescribed by GSA  
FAR (48 CFR) 52.243

**AMENDMENTS TO THE SOLICITATION**

1. The Section B clause entitled "FIXED PRICES -- CONTRACT LINE ITEMS" has been modified. The text is as follows:

**SUPPLIES OR SERVICES AND PRICES/COSTS**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT PRICE</b>	<b>TOTAL AMOUNT</b>
1	PROTOTYPE Fabricate, document, and build pilot test monitoring station IAW the Statement of Work (SOW) Station Specifications.	1	STATION	\$_____	\$_____

The prototype station shall include:

- one (1) gamma radiation monitor,
- one (1) low volume air-sampler,
- one (1) high volume air-sampler,
- one (1) calibrator for low volume air sampler
- one (1) calibrator for high volume air sampler
- one (1) data logger integrated with a telemetry and telephone link,
- one (1) portable computing device,
- one (1) power distribution center,
- one (1) system and component software,
- one (1) portable electric generator with shipping case
- one (1) set of manuals/training video,
- one (1) mounting platform, and
- one (1) set of shipping cases

OPTION (CLINS 2 - 6):

2	PRODUCTION Production monitoring stations IAW the Statement of Work System Specifications.	39	STATIONS	\$_____	\$_____
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The production stations shall include:

- one (1) gamma radiation monitor,
- one (1) low volume air-sampler,
- one (1) high volume air-sampler,
- one (1) data logger integrated with a telemetry and telephone link,
- one (1) portable computing device,
- one (1) power distribution center,
- one (1) system and component software,
- one (1) set of manuals,
- one (1) mounting platform, and
- one (1) set of shipping cases per station

3	PORTABLE ELECTRIC GENERATORS with shipping cases.	3	EACH	\$ _____	\$ _____
4	LOW VOLUME AIR SAMPLER CALIBRATORS	19	EACH	\$ _____	\$ _____
5	HIGH VOLUME AIR SAMPLER CALIBRATORS	19	EACH	\$ _____	\$ _____
6	VIDEO on CD in AVI video format	20	EACH	\$ _____	\$ _____

2. The Section J clause entitled "LIST OF ATTACHMENTS (EP 52.252-100) (APR 1984)" has been modified. The text is as follows:

Number	Attachment Title
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1	STATEMENT OF WORK
2	PAST PERFORMANCE QUESTIONNAIRE
3	TESTING AND ACCEPTANCE
4	CONCEPTUAL DRAWING
5	CLIENT AUTHORIZATION LETTER
6	QUESTIONS & RESPONSES

3. The Section L clause entitled "TECHNICAL QUESTIONS (EP 52.215-110) (APR 1984)" has been added. The text is as follows:

Offerors must submit all technical questions concerning this solicitation in writing to the contract specialist. EPA must receive the questions no later than 3/25/03. EPA will answer questions which may affect offers in an amendment to the solicitation. EPA will not reference the source of the questions.

4. The attachment entitled "STATEMENT OF WORK" has been modified. The text is as follows:

Deployable Air and Radiation Monitoring System

#### BACKGROUND

A. The United States Environmental Protection Agency's Office of Radiation and Indoor Air (ORIA) is conducting upgrades to its homeland defense capability. As part of this capabilities upgrade, the EPA requires complete operable radiation monitoring stations. In the event of an emergency, a station will be shipped to a location near the event. The station will be shipped complete. The portable electric generators and calibrators may be shipped in their individual shipping containers. Data collected from the monitoring system shall transmit automatically or on demand through the Iridium satellite network to the EPA National Air and Radiation Environmental Laboratory (NAREL), in Montgomery Alabama.

#### B. STATION SPECIFICATIONS:

\* The contractor shall provide an integrated operable radiation monitoring station in accordance with (IAW) the specifications described below per CLIN 1:

The prototype station will include:

- one (1) gamma radiation monitor,
- one (1) low volume air-sampler,
- one (1) high volume air-sampler,
- one (1) calibrator for low volume air sampler
- one (1) calibrator for high volume air sampler
- one (1) data logger integrated with a telemetry and telephone link,
- one (1) portable computing device,
- one (1) power distribution center,
- one (1) system and component software,
- one (1) portable electric generator with shipping case,
- one (1) set of manuals/training video,
- one (1) mounting platform, and
- one (1) set of shipping cases

The Prototype station shall be built solely for the purpose of testing to determine satisfactory compliance with acceptance criteria. This station shall be operated by the EPA for no less than 10 days and a maximum of 30 days (if the system has satisfied all of the testing and acceptance criteria as determined by the EPA in Attachment 3).

The vendor shall update or modify the Prototype monitoring station, including all training video and manuals, as necessary to comply with the requirements of the testing and acceptance requirements, at no additional cost to the EPA over and above the price in Schedule B.

Following acceptance by EPA of the Prototype monitoring station, the Government may order thirty-nine (39) additional monitoring stations which match the prototype per CLIN 2.

If ordered, the additional 39 stations shall include:

- one (1) gamma radiation monitor,
- one (1) low volume air-sampler,
- one (1) high volume air-sampler,
- one (1) data logger integrated with a telemetry and telephone link,
- one (1) portable computing device,
- one (1) power distribution center,
- one (1) system and component software,
- one (1) set of manuals,
- one (1) mounting platform, and
- one (1) set of shipping cases per station

In addition, the Government may order three (3) portable electric generators per CLIN 3, nineteen (19) low volume air sampling system calibrators per CLIN 4, nineteen (19) high volume air sampling system calibrators per CLIN 5, and twenty (20) copies of the video on CD in AVI Video format per CLIN 6.

#### C. COMPONENT SPECIFICATIONS

\* The components listed in this section will not be used in a stand alone

operation, but must have the capability of operating independently. Consolidation of some of the display and reporting functions is acceptable as long as all of the required functions are provided. The data logger must collect and consolidate all of the data.

#### 1. MOUNTING PLATFORM:

\* The station, when deployed, shall be mounted to a standard UV stabilized plastic pallet approximately 4 feet by 4 feet, with forklift openings on two sides (see Attachment 4 drawing for suggested configuration). Coated materials, composites, plastics, metal or other materials will be acceptable if documentation is provided demonstrating the ability of the material to withstand environmental elements over long periods of time. Weight and strength is also an important consideration. Wood is not acceptable. The mounting hardware shall allow for the components to be quickly and easily installed and un-installed upon deployment. When not deployed, the pallets for multiple stations shall be stackable, and components will be stored in shipping cases. The pallets shall not have wells or depressions that would trap rain or snow while the unit is deployed.

#### 2. SHIPPING CASES:

\* Each major component (or group of components) of the station shall have a UV stabilized plastic or UV stabilized fiberglass shipping case. Each case shall be lined with foam, cutout to fit each component which will be stored and shipped in that case. Each air sampler calibrator shall have an individual UV stabilized plastic or UV stabilized fiberglass shipping case. Coated materials, composites, plastics, metal or other materials will be acceptable if documentation is provided demonstrating the ability of the material to withstand environmental elements over long periods of time. Weight and strength is also an important consideration. Wood is not acceptable. Each air sampler calibrator case shall be lined with foam, cutout to fit each component which will be stored and shipped in that case. The shipping case and component combination weight in any case shall not exceed 150 pounds. Shipping case(s) shall meet all acceptable commercial shipping practices. (Note: Upon deployment by the Government, each shipping case and each pallet will be shipped as independent units. Upon arrival at the deployment site, the cases would be opened and the components would be assembled on the pallet by a technician.)

Each shipping case shall have handles for supporting the weight of the case with the equipment inside, while being moved using these handles, without damaging the case within the temperature range of -10 C to 50 C ambient and from 10 percent humidity to raining conditions.

#### 3. POWER DISTRIBUTION CENTER:

Each monitoring station shall contain a 115-120 Volt 60 Hz power distribution center with a single power feed. The distribution center shall have an outlet for each AC powered component with individual circuit protection for each component. It is anticipated this station will be plugged into U.S. standard household type outlet (115-120 Volt 60 Hz, with 20 Amps maximum continuous). A 25 foot power cord rated for the maximum power shall be supplied and hardwired to the power distribution panel.

The monitoring station, in total, shall operate on standard 115-120 Volt

60 Hz power, not to exceed 20 amps continuous.

4. GAMMA RADIATION MONITOR SPECIFICATIONS:

- (1) The gamma radiation monitoring component shall provide a continuous measurement of the gamma radiation field, displayed in terms of roentgen per hour or some fraction thereof. The continuous measurement shall be performed through integrating ten-minute intervals. The indication shall have an accuracy of at least (10%) of the actual gamma radiation exposure rate through the instruments full range.
- \* (2) The gamma radiation monitor shall provide an indication within the specified accuracy within a range from 5 micro roentgen per hour to 100 milli roentgen per hour. The energy response of the detector shall not vary by more than 10% within the energy range from 60 keV to 1000 keV. The gamma monitor is to be used for gross gamma exposure rate only. No 'window' (special resolution) is required.
- \* (3) The gamma radiation monitor component shall be programmed to electronically store the 10 minute integrated exposure rate, time and date, monitoring station identification, and error flags. Error flags will include counter overrun and loss of power. Also, this data shall be accessible using a computer link. The RS-232 (or internal modem) is the computer link. Other such linking devices are acceptable.
- (4) The gamma radiation monitor component shall allow the operator to manually download the electronically stored data via an RS232 connection or internal modem. The gamma radiation monitor component shall allow the operator to remotely download the electronically stored data via an RS232 connection or internal modem.
- (5) The gamma radiation monitor component shall provide a battery backup to maintain the data in the event of a power failure with a minimum of 24 hours capacity.
- \* (6) The gamma radiation monitor component, when mounted for deployment, shall have the detector one meter above the ground from the midpoint.
- (7) The gamma radiation monitor components shall be housed in an enclosure, which protects the components from the weather when deployed, and locks to ensure security of unit.
- (8) The weather housing shall be light colored or polished and sealed metal.
- (9) The gamma monitor shall be operable in environments with temperature ranges from -10 C to 50 C ambient and from 10 percent humidity to raining conditions.
- (10) All software and hardware required for on-line data

communications and data downloading shall be provided.

(11) The gamma radiation monitor component shall be calibrated using a NIST traceable standard, and include calibration documentation. The calibration shall be performed in accordance with ANSI standard ANSI N323a 1997 or equivalent.

5. LOW VOLUME AIR SAMPLER SPECIFICATIONS:

- \* (1) The air sampling component shall be programmed to provide an adjustable range of 0.5 - 3 CFM unrestricted through a 47mm Whatman EPM-2000 47 millimeter glass fiber filter or equivalent in place. The flow rate control shall be stable in the presence of mechanical vibrations.
- \* (2) The air sampling component shall maintain at least a nominal flow of 2 CFM through a 47mm diameter particulate filter head with a clean Whatman EPM-2000 47 millimeter glass filter or equivalent in place. 1.5 CFM shall be maintained under simulated filter loading conditions - an additional 8" of water pressure differential.
- (3) The air sampling component shall also include a combination 2 inch charcoal cartridge holder and 2 inch air filter [same filter type specified in section C.5.(2)] for air sampling.
- (4) The air sampling component shall include one (1) box of filters (fifty (50) filters), as specified in section C.5.(2), for each sampler. A provision shall be made to store and ship this box inside the same case in which the air sampler is stored and shipped.
- (5) The air sampling component shall include one (1) package of TEDA impregnated charcoal cartridges (ten (10) cartridges), as specified in section C.5.(3), for each sampler. A provision shall be made to store and ship this box inside the same case in which the air sampler is stored and shipped.
- (6) The air sampling component shall measure the current temperature, inlet pressure and differential pressure.
- (7) The air sampling component shall measure and electronically record the current air flow rate corrected to Standard Temperature & Pressure (STP), total volume corrected to STP, temperature minimum and maximum, the start time/date and stop time/date and flags for loss of power.
- (8) The air sampling component shall be programmed to electronically store the data specified in section C.5.(7), as well as the monitoring station identification number. Also, all data specified in section C.5.(6) and C.5.(7) shall be accessible using a provided built in display and a computer link.
- (9) The air sampling component shall allow the operator to manually download the electronically stored data via an RS232 connection.

(10) The air sampling component shall provide a battery backup to maintain the data in the event of a power failure with a minimum 24 hour capacity.

\* (11) The air sampling component, when mounted for deployment, shall have the sampling head one (1) meter above the ground. The air sampling head shall extend outside of the enclosure pointing down for rain protection. Alternate designs are acceptable if it is demonstrated and documented that the enclosure does not induce significant particle size selectivity below PM 10, while providing protection from the rain.

(12) The air sampling component shall use a 115-120 VAC 60Hz, low maintenance pump and motor. The maximum operating current draw shall be less than 15 amps. The motor duty cycle shall be a minimum of 5000 hours under near continuous use.

(13) The air sampling component shall be housed in an enclosure, which protects the components from the weather when deployed, and locks to ensure security of the unit.

(14) The weather housing shall be light colored or polished and sealed metal.

(15) The air sampling component shall be operable in environments with temperature ranges from -10 C to 50 C ambient and from 10 percent humidity to raining conditions and from sea level to 8000 feet above Mean Sea Level.

(16) All hardware interfaces and data transfer software required for on-line data communications and data downloading shall be provided.

(17) The air sampling component shall be calibrated using a NIST traceable standard, and include calibration documentation.

#### 6. CALIBRATOR FOR LOW VOLUME AIR SAMPLER

\* The calibrators shall be secondary NIST traceable standards. Each calibrator shall include all calibration documentation. The calibrator shall include all adapters required for a 2 inch sample head. The displayed flow must be within 2% of the actual flow at full scale. The weight must be less than 25 lbs. An STP flow output from the calibrator to match the STP flow is required for the air sampler. The specification for flow range for the calibrator is 0.5 to 4 CFM. A digital display for the flow is required.

#### 7. HIGH VOLUME AIR SAMPLER SPECIFICATIONS:

\* (1) The air sampling component shall be programmed to provide an adjustable range of 5 - 50 CFM unrestricted through a 4inch diameter particulate filter head with a clean 4-inch diameter Whatman EPM 2000 glass fiber filter or equivalent in place.

(2) The air sampling component shall maintain an average flow of 20 CFM (the 24-hour average must be maintained within +/-5% of the



set point of 20 CFM) using a 4-inch Whatman EPM 2000 filter or equivalent glass fiber filter media. 20 CFM shall be maintained under simulated filter loading conditions - an additional 10" of water pressure differential. Computed total airflow shall not vary from the true value greater than 3% averaged over a 24-hour period with the filter in place.

(3) The air sampling component shall include one (1) box of filters (fifty (50) filters), as specified in section C.7.(2), for each sampler. A provision shall be made to store and ship this box inside the same case in which the air sampler is stored and shipped.

(4) The air sampling component shall measure the current temperature, inlet pressure and differential pressure.

(5) The air sampling component shall measure and electronically record the current air flow rate corrected to STP, total volume corrected to STP, temperature minimum and maximum, the start time/date and stop time/date and flags for loss of power.

(6) The air sampling component shall be programmed to electronically store the data specified in section C.7.(5), as well as the monitoring station identification number. Also, all data specified in section C.7.(4) and C.7.(5) shall be accessible using a provided built in display and a computer link.

(7) The air sampling component shall provide a battery backup to maintain the data in the event of a power failure with a minimum 24-hour capacity.

\*

(8) The air sampling component, when mounted for deployment, shall have the sampling head sixty (60) inches above the ground. The air sampling head shall extend outside of the enclosure pointing down for rain protection. Alternate designs are acceptable if it is demonstrated and documented that the enclosure does not induce significant particle size selectivity below PM 10, while providing protection from the rain.

(9) The air sampling component shall use a 115-120 VAC 60Hz, low maintenance blower motor. The maximum operating current draw shall be less than 15 amps. The motor duty cycle shall be a minimum of 5000 hours under near continuous use.

(10) The air sampling component and components shall be housed in an enclosure, which protects the components from the weather when deployed, and locks to ensure security of the unit.

(11) The weather housing shall be light colored or polished and sealed metal.

(12) The air sampling component shall be operable in environments with temperature ranges from -10 C to 50 C ambient and from 10 percent humidity to raining conditions and from sea level to 8000 feet above Mean Sea Level.

(13) All hardware interfaces and data transfer software required for on-line data communications and data downloading shall be provided.

(14) The air sampling component shall be calibrated using a NIST traceable standard, and include calibration documentation.

\* (15) The air sampling component shall allow the operator to manually download the electronically stored data via an RS232 connection.

#### 8. CALIBRATOR FOR HIGH VOLUME AIR SAMPLER

\* The calibrators shall be secondary NIST traceable standards. Each calibrator shall include all calibration documentation. The calibrator shall include all adapters required for a 4-inch sample head. The displayed flow must be within 2% of the actual flow at full scale. An STP flow output from the calibrator to match the STP flow is required for the air sampler. The specification for flow range for the calibrator is 10 to 55CFM. A digital display for the flow is required.

#### 9. PORTABLE ELECTRIC GENERATOR SPECIFICATIONS

(1) Each portable electrical generator shall:

(a) include an electronically or mechanically controlled output voltage to a set voltage between 110 volts and 125 volts within (10%) of the setting throughout the rated load range.

(b) include 5 KW output at 110 volts, 60 Hz single phase.

(c) be equipped to operate on standard unleaded pump (87-Octane) gasoline.

(d) include one (1) plastic gasoline fueling container with a five (5) gallon capacity and an internally stored, integral pouring spout.

(e) be operable for a minimum of 12 hours between fuel additions, operating at 50% load.

(f) have generator dry weight be < 200 pounds, exclusive of the shipping case.

(g) include a UV stabilized plastic or UV stabilized fiberglass or painted and sealed wood shipping case. The shipping case shall be constructed such that the generator can be easily rolled out of the case for operation. The case shall include a storage space for one (1) gasoline container as specified in C.9.(1)(d) (The gasoline container shall be shipped empty). The storage case shall have fork lift openings on two sides. Each shipping case shall have handles for supporting the weight of the case with the equipment inside, while being moved using these handles, without damaging the case within the temperature range of

-10 C to 50 C ambient and from 10 percent humidity to raining conditions and from sea level to 8000 feet above Mean Sea Level.

- (h) be fitted with a spark-arresting muffler.
- (i) include a voltmeter and hour meter.
- (j) include a fuel level indicator.
- (k) include four 20 Amp 110-120 volt outlet plugs.
- (l) include a low oil automatic shutdown.
- (m) include a manual pull starter.
- (n) include 4 wheels, to allow for ease in moving the unit.
- (o) be housed in a well-ventilated enclosure, which protects the components from the weather when deployed. The weather housing shall be light colored or polished and sealed metal.
- (p) be operable in environments with temperature ranges from -10 C to 50 C ambient and from 10 percent humidity to raining conditions, while maintaining voltage and current output.

10. PORTABLE COMPUTING DEVICE SPECIFICATIONS:

- (1) Each monitoring station shall be supplied with a portable computing device that shall provide a data transfer interface with the monitoring station components.
- (2) The device shall be programmed to download all of the data specified in sections C.4.(3), C.5.(7), and C.7.(5) from all of the monitoring station components and parse the data into a Microsoft Excel spreadsheet program.
- (3) The device shall have installed and operational, all software necessary to display the raw data which is being downloaded.
- (4) The device shall be carried by the operator, and interfaced when the operator attends to the monitoring station for filter change out or for system setup and maintenance.
- (5) The device shall be operable on rechargeable batteries with a minimum battery life of 24 hours under normal operation.
- (6) Each device shall include a PC computer hot-sync interface and battery charger.
- (7) The handheld Personal Digital Assistant (PDA) device shall be less than 4" x 6" x 1", exclusive of the protective case.
- (8) The device shall include a protective case and belt clip.

(9) Each device shall provide sufficient memory to store all of the data specified in sections C.4.(3), C.5.(7), and C.7.(5) from all of the monitoring station components from 30 days of operation for a minimum of 40 monitoring stations before requiring a download and reset.

(10) The device shall have a display that is easily read in direct sunlight.

(11) The device shall be designed for outdoor use.

(12) The device shall be operable by stylus or pen through touch screen, as a field data collection device.

(13) The device shall be programmed to send data through a telephone modem.

(14) The device shall be programmed to interface through cable, wireless or infrared with the system data-logging device and with a personal computer (PC) running the Windows 2000/98 operating system. The device shall be programmed to download all monitoring system data.

11. DATA LOGGING AND TELEMETRY SPECIFICATIONS:

(1) The vendor shall supply each monitoring station with a data-logging device and Iridium satellite system telemetry transceiver.

(2) The data-logging device shall be programmed to store all data being produced by the components of the monitoring system.

(3) The data-logging device shall provide additional input capability for a meteorological station, including an input for wind direction, wind speed, barometric pressure and temperature. The vendor shall NOT provide the meteorological station.

(4) The data-logging device shall be programmed to store all of the data from all of the monitoring system components for a period of at least thirty (30) days without overwriting previous data. If the memory capacity of the data-logging device is exceeded after the thirty (30)-day period, previous data shall be overwritten from the beginning of the file, point by point.

(5) The data-logging device shall provide a battery backup to maintain the data in the event of a power failure with a minimum of 24 hours capacity.

(6) The data-logging device shall be software/firmware upgradeable. Configuration control (security) shall be maintained before and after upgrades.

(7) The data-logging device shall interact with the telemetry system to transmit all of the data collected by components of the monitoring system.

\* (8) The telemetry component shall be programmed to transmit,

using secure encrypted transmission, all of the data specified in sections C.4.(3), C.5.(7), and C.7.(5) from all of the monitoring station components through the Iridium satellite network, using an Iridium satellite telephone with a data-link plug-in, on demand, or at times required by EPA ORIA in Las Vegas, NV, as well as through a "landline" telephone modem or secure Internet connection. The Iridium transceivers provide the internet connection with the Iridium service. A land-line telephone modem is also required, however it is acceptable if this capability is not operable with the Iridium system.

(9) The Iridium transceiver for each monitoring station shall consist of one (1) handheld portable satellite telephone with battery charger and data link adapters. Iridium accounts and account information shall be provided by the EPA ORIA in Las Vegas, NV. (Iridium accounts include integral web accounts with an automatic switching capability when moving from voice to data transfer.)

(10) The data shall be retrievable as an ASCII text file at a remote location within 1 hour of transmission.

(11) Software shall be provided to the remote locations, ORIA, Las Vegas and NAREL, in Montgomery AL, which must be programmed to receive the data file and parsing of the data file as a delimited ASCII text file on a network/internet connected personal computer. The recipient computers will be using the Windows 2000/98 operating systems.

(12) The data logging and telemetry components shall be housed in an enclosure, which protects the components from the weather when deployed, and locks to ensure security of the unit. The weather housing shall be light colored or polished and sealed metal.

(13) The data logging and telemetry components shall be operable in environments with temperature ranges from -10 C to 50 C ambient and from 10 percent humidity to raining conditions without loss of function.

(14) The data logger shall transmit, through the telemetry system, all of the new data specified in sections C.4.(3), C.5.(7), and C.7.(5) collected from the time of the last transmission.

(15) The telemetry system shall transmit this data such that the remote locations specified in section C.11.(8) through (11) shall receive the data in the format specified in section C.11.(10). This data shall be transmitted four (4) times per day through the Iridium satellite system, and on demand through the Iridium satellite system, upon request by the ORIA. Also, the system shall be programmed to transmit through a "landline" telephone modem connection in the event the Iridium satellite system becomes unavailable.

(16) The data shall be retrievable at the remote location specified in the format specified in section C.11.(11), within the

time specified in section C.11.(10).

12. SYSTEM SOFTWARE:

All system and component software, setup and operation programs, including any licenses required, shall be provided. Verification and test records shall be provided for all developed software/firmware demonstrating that functional requirements are met over the range of system operating conditions specified. All system and component software and firmware shall be upgradeable. Mechanisms for configuration control (security) shall be present in all software supplied and shall be described in documentation.

13. SYSTEM WARRANTY:

Each component of the system shall include a standard manufacturer parts and labor warranty.

14. SYSTEM MANUALS:

A manual for each monitor station shall be provided for proper assembly and operation of the monitor station. Operations shall include interactions between components, such as between the gamma radiation monitor with the data logger, low volume and high volume air samplers with the data logger. Also, operations shall include interactions between the data logger and the telemetry unit and between the telemetry unit and the data receiving component at the EPA - NAREL in Montgomery Alabama.

The station assembly and operations manual shall be written to a complexity level where an entry-level technician will understand how to use this monitoring station. The manual shall include a parts/components inventory list. The manual shall include a simplistic diagram of how the components are mounted and connected together (for example a cartoon drawing).

The contractor shall provide an installation and operation manual for each component of the system. Manuals shall include detailed schematics, and in depth maintenance and repair information for each component IAW the manufacturer's standard manual.

Note: The first page of each manual shall state "The EPA may reproduce and distribute any part, or portion, including all material contained within this manual."

15. TRAINING VIDEOS:

The contractor shall provide a video that explains and demonstrates the assembly, breakdown and storage of the monitoring system, and include a demonstration and explanation of the operation of each major component of the system. The script and graphics will be reviewed by ORIA Las Vegas. The video shall be edited or revised by the contractor as necessary to incorporate reviewer comments.

NOTE: The EPA will reserve the right to copy, distribute and edit this video freely, in any video format without royalty consideration to the vendor.

**\*Annotates changes to the SOW.**

5. The attachment entitled "CLIENT AUTHORIZATION LETTER" has been added. The text is as follows:

Client Authorization Letter

(Addressee)

Dear "Client":

We are currently responding to the Environmental Protection Agency's (EPA's) RFP No. \_\_\_\_\_ for the procurement of (Procurement Title). The EPA is placing increased emphasis in their acquisitions on past performance as a source selection factor.

EPA has asked the offeror to send Past Performance Questionnaires to customers to complete and send to the Contracting Officer. Please complete the attached Past Performance Questionnaire and mail to U.S. EPA, Attn: (Contract Specialist), MD-E105-02, Research Triangle Park, NC 27711, within five (5) days of receipt of this letter.

If you are contacted by EPA for information on work we have performed under contract for your company, you are hereby authorized to respond to EPA inquiries.

Your cooperation is appreciated. Any questions may be directed to \_\_\_\_\_.

Sincerely,

6. The attachment entitled "QUESTIONS AND ANSWERS" has been added. The text is as follows:

QUESTIONS AND RESPONSES:

1. SOW C.4. (3) states that “Also, this data shall be accessible using a computer link.” Is the computer link and the RS232 connection one and the same, or is the computer link a different and separate interface to the gamma radiation monitor component? This question applies to the air sampler components as well.

The RS-232 (or internal modem) is the computer link. Other such linking devices are acceptable. This will be added to the SOW C.4.(3).

2. SOW C.4. (4) states “The gamma radiation monitor component shall allow the operator to manually download the electronically stored data via an RS232 connection or internal modem.” Does the gamma radiation monitor component have its own internal modem?

No, However there must be a link where the Gamma data can be downloaded locally. The intent is to locally download to a Personal Digital Assistant (PDA). To remotely download, the data logger would acquire the data from the Gamma monitor and store the data. When programmed (4 times per day) or on demand, the telemetry (Iridium or hard-line if Iridium became unavailable) would transmit the data stored in the data logger.

3. SOW C.5.(9) states that “the air sampling component shall allow the operator to manually download the electronically stored data via an RS232 connection”. This paragraph is not included for the high volume sampler. Is this an oversight or does the high volume sampler not require the download and RS232 requirement?

This paragraph was inadvertently removed and this paragraph will be included in the high volume air sampler specifications with the same requirements as in the Low volume air sampler specifications. This will be added to the SOW C.7.(15).

4. SOW C.11. (3) Will the EPA please define the requirements for the additional input capability for a meteorological station?

No meteorological station has been defined and therefore specifications are not available.

5. SOW C.11.(8) appears to require a telephone modem and a secure Internet connection. Does this system require a wireless Iridium satellite telephone, an internal telephone modem and a secure Internet connection?

Yes, the Iridium transceivers provide the internet connection with the Iridium service. A land-line telephone modem is also required, however it is acceptable if this capability is not operable concurrently with the Iridium system. This will be added to the SOW C.11.(8).

6. Is the modem mentioned in SOW C.11 in addition to the modem mentioned in SOW C.4?



Yes, the modem in section C.4. is referring to a computer interface for locally downloading data from the gamma monitor (RS-232 would also work for this purpose). The modem in section C.11. is referring to a backup transmission device to the Iridium system for transmitting all of the system data (data collected from all of the components by the data logger) to the NAREL Montgomery, Alabama EPA Laboratories.

7. SOW C.10.(2) data is required to be parsed into a Microsoft Excel spreadsheet program and in SOW C.11.(10) data is to be retrievable as a ASCII text file. Are these two different formats that need to be supported?

Yes, it is not yet known what format the NAREL Montgomery, Alabama EPA laboratory Database will require. Therefore the ASCII format was selected as the most generic. The operator who downloads the data at the station can not easily read the ASCII file and so there must be a parsing routine or Macro available to convert the data for display on the portable computing device. The data would be stored daily in the portable computing device as a backup to what is being transmitted.

8. Is the Government supplying the spreadsheet format?

No.

9. Throughout the RFP it appears that each measurement component is a complete and independently functioning unit. Is it the intent to ever use these components in a stand-alone application? If not, is it acceptable to consolidate some of the display and reporting functions in order to reduce the apparent duplication of functionality?

No, the components will never be used in a stand-alone operation, but must have the capability of operating independently. Consolidation is ok as long as all of the required functions are provided. The data logger must collect and consolidate all of the data. This will be added in the SOW C.

10. SOW C.4.(1), (2),and(3) there are stated requirements for 1) 10% accuracy, 2) low range of 5uR, and 3) 10 minute integration times. Is it the intent that all three have to be met at the same time ?

No.

11. SOW C.4.(2) there is an energy response linearity requirement up to 2000KeV. The more typical specification is 1000KeV, which covers the typical environmental dose where the photons are highly scattered.

This is a typographical error, the energy response linearity requirement should only extend from 60KeV to 1000KeV. This will be changed in the SOW C.4.(2).

12. Will the EPA accept a non UV stabilized plastic pallet? This will reduce the cost and provide many more supplier options.

Yes, these units may be stored or deployed for a very long period of time. The UV stabilized plastic is preferred, however coated materials, composites, plastics, metal or other materials will be acceptable if documentation is provided demonstrating the ability of the material to withstand environmental elements over long periods of time. Weight and strength is also an important consideration. Wood is not desirable for this application. This will be added to the SOW C.1.

13. The standard plastic pallet is 5" to 6" in height. The drawing in attachment 4 indicates an 8" height, which is acceptable?

The drawing is conceptual only. A 5" to 6" height pallet is acceptable.

14. SOW C.2 Shipping cases - Will the EPA accept non uv stabilized shipping cases?

Yes, these units may be stored or deployed for a very long period of time. The UV stabilized plastic is preferred, however coated materials, composites, plastics, metal or other materials will be acceptable if documentation is provided demonstrating the ability of the material to withstand environmental elements over long periods of time. Weight and strength is also an important consideration. Wood is not desirable for this application, with the possible exception of the Generator case. This will be added to the SOW C.2.

15. Comment: The maximum weight of 120 lbs. for case and component combination is unrealistic for the high volume air sampler and low volume air sampler. This limit needs to be raised for these two components to at least 150 lbs. for the low volume air sampler and 175 lbs. for the high volume air sampler. It must be noted that UV stabilized cases meet multiple Mil-STDs and are always heavy-duty cases, which have a large weight.

The shipping cases limit of 120 lbs. is now 150 lbs. for regular delivery by Federal Express. The weight limit for all cases, excluding the generator case, is 150 lbs. This will be changed in the SOW C.2.

16. Can the radiation detector be stored in the same box as another component or must it have its own separate case?

Yes, components may share shipping cases as long as the weight restrictions are met.

17. Can the power distribution center be included in a case with another component or must it

have its own separate case?

Yes, components may share shipping cases as long as the weight restrictions are met.

18. SOW C.4.(3) The 10 minute integrated exposure rate is too restrictive. Can a minimum of 20 minute integrated exposure rate or preferably a 30 minute integrated exposure rate be used?

No, the gamma instrument will collect an average exposure rate over a 10 minute averaging period and store this value.

19. SOW C.4.(6) Does the 1 meter elevation level apply to the top of the detector, midpoint or bottom of the detector system?

Mid Point. This will be added to the SOW C.4.(6).

20. SOW C.4.(7) Confirm that the detector is to be situated completely inside a metal enclosure which by its very nature reduces the sensitivity of the detector (low energy response) due to the shielding effects of the enclosure. Will an environmentally sealed detector be acceptable?

Yes, the enclosure need not be metal. The intent is to protect the detector from the elements and to provide added security.

21. SOW C.4.(7) Will a wire cage enclosure with locking feature to prevent tampering be acceptable to the EPA?

Yes, a wire cage will be acceptable as long as it meets the SOW specifications. The intent is to protect the detector from the elements and to provide added security.

22. C.9.(1)(o) Does the EPA require a permanently installed enclosure for the electric generator, or will a field assembly style of enclosure to protect from rain or snow be acceptable?

No, the enclosure is for shipping. The generator may be rolled out of the shipping enclosure for operation. The generator must have standard safety covers for the electrical and mechanical.

23. SOW C.11.(3) provides a data-logging device that is programmed to receive inputs from a specific meteorological station. Compatibility can be provided for other manufacturer meteorological stations, but will require optional programming services.

The meteorological station input is not specified and therefore the compatibility plan is acceptable.

24. SOW C.11.(9) The hand held Iridium phones do not permit remote auto-off function. The Iridium transceiver product without voice capability is the only Iridium device that will permit

on-off interaction of data transmission from remote host computer.

The Iridium transceiver product is acceptable.

25. Utilization of a voice-data Iridium phone will conflict with C.11.(15) and other specifications in this section, which require automatic data transfer from the station to the host computer.

There is no intent to use the voice feature of the Iridium system, so the transceiver version is acceptable.

26. SOW C.4.(2) Is the gamma radiation monitor going to be used for exposure rate only? If this is correct can we assume that no precise resolution and identification is needed within the 60 Kev to 2000 Kev range?

The gamma monitor is going to be used for gross gamma exposure rate only. No "window" (spectral resolution) is required. This will be added to the SOW C.4.(2).

27. When counting, does the gamma radiation monitor need to be shielded from the environment?

Yes, protection from the environmental elements is required, however radiation shielding is not.

28. What is the gamma radiation monitor going to be counting, the filters or the air?

The gamma radiation detector is intended to monitor the ambient gamma radiation.

29. Is the gamma radiation monitor going to be counting real time?

Yes.

30. Are the air samplers going to be off line collectors?

No, the air-sampling units will not collect radiation data for the air samplers.

31. Are the airflow requirements the same from sea level to 8000 feet? If not, please specify the airflow requirement for 8000 feet.

Yes, the Standard Temperature & Pressure (STP) corrected flow rate is the same.

32. Is the monitoring station conceptual drawing based on a current prototype? If so, are drawings going to be available?

No current prototypes exist. No other drawing will be provided.

33. Can you provide a brief step by step explanation how the station will work from deployment of the system to removing the system from the site?

Yes, the Government will ship the units via FedEx, charter, military transport or truck to the staging area. Upon arrival to the staging area, the units would be divided up and assigned to operators (Government personnel). The operators would receive a very brief training overview and then the operators would carry (by vehicle) their assigned unit to the assigned location for setup and operation. A location with 120 V power will be necessary as only 4 generators would be supplied. After set-up, the air sampler would be calibrated and would begin operating. The gamma unit would be operationally checked and brought online. The telemetry and data logger would be initiated as well. Filters would be changed daily for the high volume samplers and depending on the conditions, filters would be changed from 3 days to 7 days for the low volume air samplers. Operators would download the data from the data logger manually each day as a backup and the system would send the collected data four times per day (or on demand) through the telemetry system for upload at NAREL in Montgomery Alabama. When removing the system, the system would be checked for contamination and decontaminated if necessary. The operator would disassemble and re-pack the system in the shipping cases and ship the system back to the storage location.

34. Could you describe a normal day of operation for the station and a day where abnormally high counts are registered?

As described in the previous question #33. High counts may trigger a more frequent change-out of the high volume filter by the operator, otherwise no change to the operation of the system will be required.

35. Is this system fully automatic? If no, explain the operator responsibility step by step.

Yes, the data logger and telemetry must be fully automatic in the collection of the data from all of the components and the transmittal of this data, however the operator will need to start up the system and enter parameters.

36. a) Will the two air samplers be run simultaneously? b) Can they use the same motor/pump to create the required airflow? c) Can they be incorporated in one case instead of the two?

a) Yes, the two air samplers will run simultaneously and also independently but need not be started at exactly the same time. b) No, with two separate motor pumps the second air sampler would serve as a backup unit in the event that one of the units fails. c) No, a common motor/pump design is not acceptable.

37. Are the air samplers going to work independently of the gamma radiation monitor? The way I understand it, the system is going to be continuously monitoring the atmosphere and if abnormally high counts are encountered, a technician would collect the filter(s) sample(s) for that particular period and would send them to a laboratory for further analysis. Is this correct?

Yes, the gamma monitoring component is independent from the air sampler components. The data collection function combines the data streams for transmission at the data logger level. Air samplers from both samplers would be collected regardless of the gamma indication assuming it is safe for the technician to go to the station to perform the filter change-out.

38. SOW C.6. What is the specification for accuracy?

The displayed flow must be within 2% of the actual flow at full scale. This will be added in the SOW C.6.

39. SOW C.6. What is the specification for maximum weight, if any?

The weight shall be less than 25 lbs. This will be added in the SOW C.6.

40. SOW C.6. What is the specification for dimensions, if any?

none

41. SOW C.6. Does the EPA require an STP flow output from the calibrator to match the STP flow required for the air sampler?

Yes, this will be added to the SOW C.6.

42. SOW C.6. What is the specification for flow range for the calibrator?

0.5 to 4 CFM. This will be added to the SOW C.6.

43. SOW C.6. Does the EPA require a digital display for the flow?

Yes, this will be added to the SOW C.6.

44. SOW C.8. What is the specification for accuracy?

The displayed flow must be within 2% of the actual flow at full scale. This will be added to the SOW C.8.

45. SOW C.8. What is the specification for maximum weight, if any?

none

46. SOW C.8. What is the specification for dimensions, if any?

none

47. SOW C.8. Does the EPA require an STP flow output from the calibrator to match the STP flow required for the air sampler?

Yes, this will be added to the SOW C.8.

48. SOW C.8. What is the specification for flow range for the calibrator?

10 to 55 CFM. This will be added to the SOW C.8.

49. SOW C.8. Does the EPA require a digital display for the flow?

Yes, this will be added to the SOW C.8.

50. SOW C.5.(1) Should the 47mm diameter value listed in sentence one, line 3 be 2 inch?

References to 2 inch filter holders of filters will be changed to 47 mm in the SOW C.5.(1).

51. SOW C.5.(2) Should the 47mm diameter value listed in sentence one, line 3 be 2 inch?

References to 2 inch filter holders of filters will be changed to 47 mm in the SOW C.5.(2).

52. SOW C.5.(2) Should the 15 CFM value listed in sentence two, be 1.5 CFM?

Yes, this is a typographical error. The value is 1.5 CFM. This will be changed in the SOW C.5.(2).

53. SOW C.5.(11) Will the EPA permit an alternate design whereby the sample head points vertically upward outside of the enclosure with a design that ensures protection of the filter holder and paper from the rain?

Yes, an alternate design would be acceptable if it is demonstrated and documented that the enclosure does not induce significant particle size selectivity below PM 10, while providing protection from the rain. This will be added to the SOW C.5.(11).

54. SOW C.7.(1) Is the 5-30 CFM flow range correct as listed in sentence one?

No, the flow range requirement for the high volume air sampler should be 15 – 50 CFM. This will be changed in the SOW C.7.(1).

55. SOW C.7.(2) Is the term "computed total airflow" in sentence 3 equivalent to total volume?

Yes.

56. SOW C.7.(8) Will the EPA permit an alternate design whereby the sample head points vertically upward outside of the enclosure with a design that ensures protection of the filter holder and paper from rain?

Yes, an alternate design would be acceptable if it is demonstrated and documented that the enclosure does not induce significant particle size selectivity below PM 10, while providing protection from the rain. This will be added to the SOW C.7.(8).

57. Gamma monitoring - Is the dose to be measured as “exposure” or “ambient”.

The measured value from the gamma monitor is in exposure rate in micro - and mili -Roentgen per hour.